STATE OF SOUTH CAROLINA

BEFORE THE PUBLIC SERVICE COMMISSION

DOCKET NO. 2016-8-E
DOCKET NO. 2016-10-E

In the Matter of:	)	
	)	
Duke Energy Progress, LLC's Integrated Resource Plan (IRP)	)	**COMMENTS OF SOUTH CAROLINA COASTAL CONSERVATION LEAGUE AND SOUTHERN ALLIANCE FOR CLEAN ENERGY**
	)	
In the Matter of:	)	
	)	
Duke Energy Carolinas, LLC's Integrated Resource Plan (IRP)	)	

The South Carolina Coastal Conservation League ("CCL") and Southern Alliance for Clean Energy ("SACE") hereby submit comments in the above-captioned dockets concerning the 2016 Integrated Resource Plans ("IRPs") of Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, Inc. ("DEP") (collectively, "Duke Energy" or "Duke").

I. INTRODUCTION

A. Summary

Key observations from a review of the Duke 2016 IRPs include the following:

- The new assumption that the DEC and DEP systems are now winter-peaking rather than summer-peaking has significant implications for the IRPs and warrants careful review.
- Duke's load forecasts are a major factor determining its need for new resources to meet system energy and demand, and should be closely scrutinized.

- Duke's IRPs may be underestimating the potential for cost-effective solar and energy efficiency resources.
- Duke's IRPs lack a robust analysis of land-based wind energy resources.
- Duke's 2016 IRPs feature an over-reliance on new natural gas generating capacity.
- The centerpiece of DEC's IRP is the Lee nuclear plant, yet neither IRP discusses the possibility of purchasing an ownership share of the new V.C. Summer nuclear units.
- Duke's System Carbon Mass Cap Case, a key justification for the Lee nuclear plant, is poorly described.

Without a careful, searching review of these and other issues, the Commission cannot have confidence that Duke's 2016 IRPs are putting the companies on a path toward the least-cost, least-risk, least-polluting energy future for their South Carolina bill-payers.

B. The DEC and DEP IRPs Have Important Implications for South Carolina's Energy Future.

The Commission has previously recognized the important objective to be served by the resource planning process:

> The objective of the IRP process is the development of a plan that results in the minimization of the long run total costs of the utility's overall system and produces the least cost to the consumer consistent with the availability of an adequate and reliable supply of electricity while maintaining system flexibility and considering environmental impacts.

Order No. 91-1002, Appendix A at 1. Utility IRPs also have implications for important decisions facing the Commission in other proceedings. For example, the IRP is the basis for a utility's decision to build or acquire a new generating resource, and therefore is cited by utilities in any application for a new unit certification. As such, it should be the first place in which a utility discloses and evaluates a potential need for new generation resources, or a decision to defer or abandon a previously announced resource acquisition.

The DEC and DEP IRPs are also integrally related to the State Energy Plan. The General Assembly has declared that "[i]t is the policy of this State to have a comprehensive state energy plan that maximizes to the extent practical environmental quality and energy conservation and efficiency and minimizes the cost of energy throughout the State." S.C. Code Ann. § 48-52-210(A) (2011). A robust review of utility IRPs by the Commission, ORS and stakeholders is critical to effectuate implementation of this State policy.

In light of the importance of the IRPs to the State Energy Plan, CCL made several recommendations, supported by SACE, regarding best practices for resource planning to the Electric and Natural Gas Resource Planning Policy Review subcommittee, including the following:

- Requirements should be established to ensure that IRP documents include economic and environmental outcome metrics. These metrics should be presented for the selected plan and for alternative plans that were not selected.
- A set of relevant alternative resource portfolios should be established and updated annually, and utilities should include at a minimum this set of portfolios as part of their IRP analysis and public documentation.
- A set of relevant scenarios should be established and updated annually, and utilities should include at a minimum this set of scenarios as part of their IRP analysis and public documentation.

- A set of energy efficiency market penetration scenarios should be established and updated annually, and utilities should include at a minimum this set of scenarios as part of their energy efficiency potential analyses. Additionally, a requirement should be established for producing and updating efficiency potential studies at reasonable intervals.

As discussed in further detail in these comments, the 2016 Duke IRPs satisfy some of the best practices criteria listed in the above recommendations, but fall short in many areas. The alternative resource portfolios modeled for the 2016 IRPs do not appear to capture the full range of options, and similarly the scenarios included do not appear to represent a reasonable exploration of possible future circumstances. The IRPs do contain economic outcome metrics (see, for example, DEC IRP Tables A-4 and A-5 at 73 and 75, respectively). However, important information is obscured by displaying revenue requirements only relative to the base case and not in absolute terms; also, there is no view of annual revenue requirements which would indicate how customer bills are expected to change over time. The IRPs also contain some environmental outcome metrics, but the latter are incomplete. The CO_2 emissions projections, for example in the DEC IRP at 74-75, stop at year 2031, even though the modeling horizon runs through 2060, and the SO_2 and NOx data (DEC IRP at 149) are historical only.

The State Energy Plan Steering Committee has forwarded a recommendation concerning IRP reform to the State Regulation of Public Utilities Review Committee. CCL and SACE anticipate that a task force will be studying ways to improve and bolster South Carolina electric utilities' IRP processes going forward, including consideration of the above recommendations. The Committee's deliberations on these recommendations should not serve as a rationale for the Commission not to undertake a careful and searching review of the utilities' IRPs. In fact, the opposite is true; the Commission's expert review of the IRPs would contribute to any study that results from the development of the State Energy Plan.

This Commission has previously signaled its intent to take a more active role in reviewing the utility IRPs. In an order related to the DEC and DEP 2011 IRPs, the Commission declared that the electric utility IRP process "is an important planning tool for the [electric utilities] and the Commission," and accordingly, recognized the value of a "transparent and open process" regarding IRPs. Order No. 2012-96 at 2. The Commission further determined that the IRP process "will constitute a proceeding," under South Carolina law, "into which intervention is permitted," and noted that it may require the utility to file information in addition to the IRP, and require intervenors to file written comments. Id. at 1. Based on the parties' filings, the Commission may determine whether additional proceedings are appropriate. Id. Finally, the Commission held that it must determine whether a utility IRP meets its requirements, and that "[g]oing forward, [it] will explicitly make such a determination." Id.

CCL and SACE have been requesting more active Commission engagement on IRPs for years, and intend to present our perspective on recent IRP proceedings to the State Energy Plan IRP study committee. We urge the Commission to act in this proceeding to ensure that the present IRPs carry out the statutory and policy goals of the IRP process and fully evaluate the range of options available to meet South Carolina customer needs in a way that conserves resources and reduces electricity bills.

II. DUKE'S EVALUATION OF RESOURCE OPTIONS FOR ITS 2016 IRPS DESERVES CAREFUL SCRUTINY.

A. Preliminary Considerations Affecting the Resource Plans.

For the first time, DEC and DEP have developed their IRPs based on the assumption that each company's system needs will peak in the winter, rather than in the summer. Switching to an assumption that the system is winter-peaking affects the outcome of the planning process; for example, by likely devaluing the capacity provided by solar at peak times, and by likely enhancing the value of certain energy efficiency or demand response measures, such as water heater switches. Duke's switch to a winter peak planning paradigm therefore warrants close review.

The IRPs briefly reference winter load data from recent years as well as increasing solar penetration as factors behind the change to a winter-peaking system. 2016 DEC IRP at 31. It is critical for utilities to monitor and adapt to changing weather patterns and grid conditions, but major changes to planning approaches must be thoroughly justified. This major change will impact the value of both traditional resources and alternative resources such as solar, wind, and customer-side energy efficiency and demand response, with implications for procurement and program design – issues not discussed in the action plans of either IRP. The brief discussion of this change in the 2016 IRPs is insufficient and needs further review, to ensure that any changes to system peak expectations are well characterized and supported, and to ensure that any such changes are consistently reflected throughout Duke's planning process.

In addition, for the 2016 IRPs, DEC and DEP have lowered their load forecasts. Duke's load forecast is another major factor determining its need for new resources to meet system energy and demand. Load forecasting inputs and methodologies must be reasonable to ensure that the utility is not overbuilding its system and thereby inflating costs to customers, or conversely not underbuilding its system and inadequately preparing for system needs. Although Duke's scenarios for its portfolio analysis include "Current Trends," "Economic Recession," and "Economic Expansion," it is unclear whether these scenarios feature varying load growth assumptions. 2016 DEC IRP at 36. Load growth assumptions must be reasonable and transparent across scenarios. Any uncertainty about load growth must be recognized and planned for, and generally favors more modular, flexible resource types with shorter construction lead times.

B. Both the DEC and the DEP 2016 IRPs May Be Underestimating Cost-Effective Solar Potential.

Both DEC and DEP expect to add solar capacity to their grids during the planning period. Some of this new solar capacity is expected to contribute to compliance with the North Carolina Renewable and Efficiency Portfolio Standard ("NC REPS"), some is expected to contribute to reaching South Carolina Distributed Energy Resource Program ("SC DERP") goals, and some is described as "non-compliance renewables." Duke uses this term to refer to utility-scale solar PV projects that are designated as qualifying facilities under the Public Utility Regulatory Policies Act ("PURPA"), and thus are eligible for Duke's standard offer PURPA tariffs in the Carolinas, but that are not needed to satisfy renewable energy goals of the NC REPS or SC DERP. This solar capacity is being included in Duke's IRPs because the cost of utility-scale solar photovoltaic ("PV") energy has fallen so far that solar developers can finance and construct projects based on PURPA tariffs under which DEC and DEP pay for power at their avoided cost rates. In some cases, developers supplement PURPA tariff compensation with separate contracts with non-utility entities wishing to purchase project RECs.

Non-compliance renewables have only been developed in the North Carolina portions of DEC's and DEP's service territories so far, due in large part to the 15-year standard offer PURPA tariff in North Carolina. In South Carolina, by contrast, DEC and DEP only offer a 10-year PURPA tariff, which makes solar project financing significantly more challenging. The importance of long-term PPAs was pointed out by an energy and environmental consulting firm retained by the South Carolina Office of Regulatory Staff, which concluded in a February 2016 memorandum that "[f]inancing and building more technologies like wind and solar PV electric generation resources is easier and less costly with longer-term PPAs." [1] The memo explained that "[s]olar PPAs may be as long as 25 to 30 years, although terms of 15 to 20 years are often quoted and executed. The industry standard for renewable energy PPA terms is usually in the 20- to 30-year range." Aligning with industry best practice by offering a 15-year (or longer) PURPA tariff in South Carolina would likely spur development of hundreds of megawatts ("MW") of utility-scale solar projects across DEC and DEP territory in South Carolina, which could be developed at or below the avoided cost of polluting fossil fuel–derived power.

The cost-effectiveness of utilizing this PURPA-based solar opportunity should be explored and described as part of the portfolio analysis within the Duke Energy IRPs. This analysis could include a comparison of Company-owned resources and third-party-owned resources, a comparison of shorter and longer PPA term lengths (and perhaps mixes of projects with differing PPA term lengths), and a comparison of smaller-scale

[1] Power Purchase Agreement (PPA) Term Length and Prices: Memo on behalf of the Office of Regulatory Staff, Energy and Environmental Economics, Inc. at 4 (Feb. 22, 2016), available at http://www.regulatorystaff.sc.gov/Documents/Electric%20and%20Gas/PPA%20Term%20Length%20%20Prices%202-26-2016.pdf.

projects such as 2 MW or 5 MW arrays and larger projects such as 50 MW or 75 MW arrays that may achieve economies of scale.

South Carolina's neighbors have become national leaders in solar energy development. With more than 2,400 MW of installed solar capacity, North Carolina ranks 3rd in the nation for solar energy.[2] Georgia currently ranks 12th in the nation[3], and Georgia Power's 2016 IRP has added 1,600 MW of renewable energy (primarily solar) to the utility's planned generation mix over the next 5 years.[4] While Act 236 has begun to spur solar development in South Carolina, tremendous untapped opportunities remain, and the solar growth seen in the Southeast warrants in-depth, transparent analysis of additional solar options for South Carolina, as this resource is on track to outcompete coal and gas resources not only on environmental impacts, but also on economics.

C. Both the DEC and the DEP IRPs May Be Underestimating Cost-Effective Energy Efficiency Potential.

Both DEC and DEP have successfully implemented a diverse portfolio of customer-targeted energy efficiency and demand response programs for many years, and both the 2016 IRPs feature ongoing implementation of a suite of programs that are expected to reduce energy consumption and peak load demand on the DEC and DEP systems. Regulators and stakeholders must review whether the scope and targeted savings levels of the efficiency programs in the plans are optimal. Duke has included numerous new Company-owned power plants in its IRPs, which will deliver power at a levelized

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[2] SEIA, State Solar Policy: North Carolina Solar (last visited Dec. 1, 2016), available at http://www.seia.org/state-solar-policy/north-carolina.
[3] SEIA, State Solar Policy: Georgia Solar (last visited Dec. 1, 2016), available at http://www.seia.org/state-solar-policy/georgia.
[4] Georgia Public Service Commission, News Release: Commission Approves Agreement on Georgia Power Integrated Resource Plan (July 28, 2016), available at http://www.psc.state.ga.us/GetNewsRecordAttachment.aspx?ID=635.

cost of approximately 6 cents per kWh or in some cases at much higher cost. Given the low cost of energy efficiency experienced in the Carolinas of 2-3 cents per kWh,[5] the Company should re-examine its apparent under-reliance on this least-cost resource in its IRPs.

Energy efficiency should be evaluated on a level playing field with supply-side resources, or else the utility's analysis will be inappropriately biased and will arrive at a plan that does not minimize economic and environmental costs and risks. Evaluating efficiency on a level playing field means including the resource in portfolio and scenario analysis at varying levels, without a pre-analysis step of screening out a subset of efficiency measures or programs via utility system economic screens such as the utility cost test. The IRP is the most comprehensive and informative long-term system-wide economic analysis that utilities perform, and screening out efficiency options prior to running the resource planning models biases the analysis in favor of supply-side options.

Two other key factors that must be considered in reviewing Duke Energy's treatment of efficiency in its planning process are the assumed costs of efficiency programs over the planning period and the program approaches included as part of the efficiency portfolio. Program cost assumptions must be reasonable and based on the best data and industry expertise available. The Duke IRPs are unclear as to the cost assumptions used for the expanded efficiency option modeled.[6] Additionally, efficiency

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[5] For example, ORS reported that DEC's expected lifetime cost of energy saved for its 2017 efficiency programs is 2.5 cents per kWh. ORS, Review of DEC Application for Approval of Rider 8 at 6 (May 16, 2016), available at https://dms.psc.sc.gov/Attachments/Matter/db98229d-078c-40ce-9d8a-f0034fbcfbfa. Likewise, the expected lifetime cost of energy saved for DEP's 2017 efficiency programs is 1.97 cents per kWh. ORS, Review of DEP Application for Approval of Rider DSM/EE-8 at 7 (Oct. 17, 2016), available at https://dms.psc.sc.gov/Attachments/Matter/a271a402-f171-4b37-839d-b499220d1274.

[6] See DEC IRP at 127 ("In addition to this Base Portfolio level EE forecast, DEC also prepared a High Portfolio EE savings projection that assumed that the same types of programs offered in the Base Portfolio, including potential new technologies, can be offered at higher levels of participation provided that

program approaches must include an appropriate range of interventions designed to eliminate barriers to customer adoption of efficiency measures. Customer support and access to financing are important and persistent gaps within efficiency markets in the Carolinas, and Duke Energy could create offerings to bridge these gaps and thus increase participation in both residential and non-residential programs. These possibilities for expanding energy savings and others can and should be explored as part of the IRP process.

Duke Energy has commissioned an updated energy efficiency market potential study. 2016 DEC IRP at 19. To our knowledge, that study has not incorporated input from efficiency advocates or electric sector stakeholders, whether through the DEC and DEP efficiency collaboratives or informally. The lack of stakeholder involvement is disappointing. CCL and SACE are hopeful that the critical elements of efficiency planning noted briefly above are addressed within the potential study, and look forward to providing feedback to the Company and Commission on the study when it becomes available.

D. Duke's 2016 IRPs Lack a Robust Analysis of Land-Based Wind Energy Resources.

South Carolina has abundant potential for land-based wind energy resources. An estimate published by the National Renewable Energy Laboratory in February 2015 shows that South Carolina contains 10,299 megawatts of potential land-based wind energy capacity, with greater than 35% gross capacity factors, at 110 meter hub height

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additional money is spent on program costs to encourage additional customers to participate. The High Portfolio included in the IRP modeling assumed a 50% increase in participation for all of the Base Portfolio programs, with the exception of programs already designed to reach all eligible participants in the Base Portfolio, including the various behavioral programs (MyHER, Business Energy Reports and Smart Energy in Offices).").

using 2014 wind turbine technology.[7] A significant portion of this potential wind capacity is located within DEC or DEP service territory.[8]

Despite this potential, Duke gives short shrift to wind energy in its 2016 IRPs. Although a generic 150 MW land-based wind facility was included in the initial technology screening analysis, land-based wind was not included in either utility's Base Case resource plan. As to why, each IRP simply explains that "[i]nvesting in wind inside of [DEC's/DEP's] footprint is unlikely in the short term in spite of" the federal wind energy production tax credit, and that this is "primarily due to a lack of suitable sites and permitting challenges, as well as less significant expected drops in capital costs compared to other renewable technologies like solar." See DEC IRP at 24-25; DEP IRP at 25.

Given the potential for land-based wind in South Carolina, Duke should either disclose more fully the basis for its decision to omit land-based wind from its 2016 IRPs or revisit its analysis of this resource, and the Commission should carefully scrutinize Duke's assumptions and decisions regarding wind energy resources in its 2016 IRPs.

E. Duke's 2016 IRPs Feature an Over-Reliance on New Natural Gas Generating Capacity.

Both DEC's and DEP's long-term resource plans feature a heavy reliance on new natural gas plants. DEP in particular appears to be betting ratepayer dollars on new gas plants, with 5,343 MW of new natural gas capacity in its 2016 IRP. DEP 2016 IRP at 46. While gas plant capital costs are relatively low and construction is relatively quick compared to new nuclear, natural gas generation is subject to numerous uncertainties,

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[7] NREL, Estimates of Land Area and Wind Energy Potential, By State, for areas >= 35% Capacity Factor at 80, 110, and 140m (February 2015), available at http://apps2.eere.energy.gov/wind/windexchange/docs/wind_potential_80m_110m_140m_35percent.xlsx.

[8] NREL, map of potential wind capacity at 110-meters hub height in South Carolina (last visited Dec. 1, 2016), available at http://apps2.eere.energy.gov/wind/windexchange/images/windmaps/sc_110m_potential.jpg.

such as fuel cost volatility, potential supply disruptions and the uncertainty around regulation of carbon emissions. Additional costs, environmental impacts, and implementation issues can arise if new pipeline infrastructure is needed due to changing regional gas supply and demand. Thus, DEP's strategy of selecting 72% of its new capacity as natural gas–fueled resources also deserves scrutiny.

F. DEC Is "Betting the Farm" on New Nuclear Generating Capacity.

As in previous years, the centerpiece of DEC's long-term resource plan is the Lee nuclear plant, a 2,234 MW power plant that would cost $10 billion or more to construct and billions of dollars more to finance.[9] Based on typical DEC state allocations for capital and operating expenses, South Carolina families and businesses would shoulder approximately one quarter of those costs. It is critical that DEC justify an expense of this magnitude. DEC's base case plan assumes that the Lee nuclear plant will be fully operational by the summer of 2028. With a lead time of less than a dozen years, DEC will need to secure approval of this plant in the next several years in order to meet the timetable assumed in its base case. Thus, it behooves regulators and stakeholders to be scrutinizing this decision now, and in depth, before the "horse has left the barn." This IRP proceeding is an appropriate place to begin that review.

In the Joint Planning Case (which would require additional regulatory approvals), DEC and DEP project shared ownership of the nuclear plant. This IRP proceeding is an appropriate proceeding to evaluate whether DEC and DEP should seek approval to

[9] The V.C. Summer project to construct two new nuclear units in South Carolina was originally expected to cost about $10 billion, but current estimates put the total cost around $14 billion. Roddie Burris, SCE&G asking for $852 million more to finish Summer nuclear plants, The State (June 13, 2016), available at http://www.thestate.com/news/business/article83609292.html.

conduct joint planning, an issue that has not been resolved since the merger of Duke Energy and Progress Energy.

1. Duke's System Carbon Mass Cap Case, a key justification for the Lee nuclear plant, is poorly described.

As presented in DEC's 2016 IRP, the linchpin of Duke's case for including the Lee nuclear plant in its plan is the System Carbon Mass Cap Case: "While Portfolio #4 had the lowest [present value of revenue requirements] due to the absence of Lee Nuclear, Portfolio #4 was not selected as the Base Case because it's[sic] carbon footprint would not be sustainable over the long term in a System CO_2 Mass Cap plan if new nuclear generation was not available in the late 2020s." 2016 DEC IRP at 37.

Despite the importance of the System Carbon Mass Cap Case to DEC's justification for including the Lee Nuclear Plant in its Base Case, very little can be ascertained about the System Carbon Mass Cap Case from Duke's IRPs. For example, the IRPs do not state Duke's assumption as to the level or timing of the cap, or describe the emissions allowance market in which Duke would participate. In the absence of federal regulation, it is unlikely that the states of North and South Carolina will act to institute state caps on greenhouse gas emissions. Realistically, any mass cap under which Duke would operate will be established under a national policy, with allowance markets used to minimize compliance costs, similar to existing systems created to implement federal SO_2 and NOx regulations. Duke would need to justify investment decisions by comparing the economic and environmental costs of alternatives available under such a system, and arriving at a demonstrably prudent mix of energy efficiency programs, new resource deployment, power purchases, unit retirements, and purchasing emissions allowances on the national market.

2. The possibility of purchasing a portion of the new V.C. Summer units is not explored.

As the Commission is well aware, South Carolina Electric & Gas Company ("SCE&G") and Santee Cooper are partnering to build two new nuclear units in Jenkinsville, SC. Upon commercial operation of the units, Santee Cooper projects grossly excessive generating capacity on its system, and has accordingly sought to sell a significant portion of its share of the project.[10] While SCE&G has agreed to purchase a small portion of Santee Cooper's share (an additional 5% of the project), Santee Cooper is likely still interested in selling additional portions of its ownership in the project.

Duke Energy has stated support for joint ownership of new nuclear in South Carolina.[11] Yet despite touting the benefits of new nuclear with regard to the Lee nuclear plant, neither DEC's nor DEP's 2016 IRP describes an evaluation of the possibility of purchasing an ownership share of the V.C. Summer project. In their 2013 IRPs, DEC and DEP each mentioned that discussions continued with Santee Cooper regarding a potential purchase of an interest in the V.C. Summer units and included a total of 224 MW of capacity from V.C. Summer in their base cases. DEC 2013 IRP at 7-8; DEP 2013 IRP at 7-8. However, in January 2014, news reports indicated that Duke was no longer in negotiations to buy a portion of Santee Cooper's share in the project.[12] The reasons for

[10] Santee Cooper has negotiated with energy providers in Florida, Ohio, Mississippi, North Carolina, and South Carolina, and previously sought to reduce its project ownership from 45% to 20%. Reuters, SCANA raises stake in new Summer nuclear units; Duke bows out (Jan. 27, 2014), available at http://www.reuters.com/article/utilities-nuclear-scana-idUSL2N0L201E20140128.
[11] See SC PSC Docket 2011-20-E, Settlement Agreement at paragraph II.6, available at https://dms.psc.sc.gov/Attachments/Matter/74ab25d0-9bea-e5f5-4a2853cdfba03fe3.
[12] GenerationHub, Duke no longer in nuclear talks with Santee Cooper, but SCANA increases ownership share (Jan. 27, 2014), available at http://generationhub.com/2014/01/27/duke-no-longer-in-nuclear-talks-with-santee-cooper.

removing the 224 MW of nuclear capacity from the DEC and DEP base cases are not discussed in either the 2014, 2015 or 2016 IRPs.

While CCL and SACE take no position regarding whether or not it is advisable for DEC and DEP to acquire an interest in the new V.C. Summer units, we note that the Commission has not yet exercised oversight over this major resource investment decision. The IRP proceeding is an appropriate proceeding for the Commission to review Duke's decision to exclude any potential generation option from its future plans.

III. CONCLUSION

In light of the issues discussed in these comments, the Commission cannot have confidence that the DEC and DEP 2016 IRPs are the lowest-cost, lowest-risk plans for meeting their customers' needs in an economic, reliable and environmentally responsible manner. CCL and SACE urge the Commission to undertake a careful and searching review of the Duke 2016 IRPs to determine whether they meet the requirements of this Commission and state law, and whether they effectuate the policies of the state including the State Energy Plan.

Respectfully submitted this 1st day of December, 2016.

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STATE OF SOUTH CAROLINA

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I certify that the following persons have been served with one (1) copy of Comments of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy by electronic mail and/or U.S. First Class Mail at the addresses set forth below:

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This the 1st day of December, 2016.

s/ Robin G. Dunn